

REMARKS

Claims 1, 2, 6, 7 and 21 currently appear in this application. The Office Action of January 15 and the Advisory Action of April 11, 2008, have been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Claim Amendments

Claim 1 has been amended by incorporating therein the subject matter of claims 3 and 4. The α -isomaltosyl glucosaccharide-forming enzyme used in the process of claim 1 is defined by its origin. The origin can be found in the specification as filed at pages 10-11.

Rejections under 35 U.S.C. 112

Claims 1-4, 6, 7, 10-14, 16-19 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that claim 1 is confusing because:

a. it is not clear whether the claimed method required the recited activity of the enzyme, or whether an enzyme that possesses the recited activity under some other conditions would be encompassed by the claims;

b. it is not clear which level of increase would be considered "substantial" and which would not; and

c. there is no antecedent basis for the term "the reducing power" and it is not clear what is being reduced by this method.

This rejection is respectfully traversed. First, it should be noted that an α -isomaltosyl glucosaccharide-forming enzyme used in the process of claim 1 is defined with its activity as recited in claim 1. While applicant is not completely sure what is meant by the wording "under some conditions", it is required for the α -isomaltosyl glucosaccharide-forming enzyme used in the process of claim 1 to have the activity as recited in claim 1. That is, the enzyme has the activity recited in claim 1 when it is involved in the process of claim 1. In order better to define the enzyme, the origin of the enzyme has been added to claim 1.

Second, the term "substantially" has been deleted from claim 1, even though the term "substantially" has been held to be not properly rejected, e.g., "substantially

increase... efficiency of... compound", *In re Mattison*, 450 F.2d 563, 565; 184 USPQ 484, 486 (CCPA, 1975).

The term "reducing power" is the ability, or power, to reduce a substance, as opposed to oxidizing as substance. It is well known to those skilled in the art that glucose or oligosaccharides containing glucose residues exhibit "reducing power" in aqueous solution because the first position of the glucose residue forms an aldehyde structure in aqueous solution. Therefore, the phrase "without increasing the reducing power of the reaction mixture" means that the "reducing power" of the reaction mixture does not increase even when a saccharide with a glucose polymerization degree of 3 or higher, and bearing both the α -1,6-glucosidic linkage as a linkage at the non-reducing end and the α -1,4-glucosidic linkage other than the linkage at the non-reducing end is formed from a saccharide with a glucose polymerization degree of 2 or higher and bearing the α -1,4-glucosidic linkage as linkage at the non-reducing end by α -glucosyl-transferring reaction of the α -isomaltosyl glucosaccharide-forming enzyme. This is a property of the α -isomaltosyl glucosaccharide-forming enzyme.

"Reducing power" is a well known term of the art in saccharide chemistry, as evidenced by the following three articles, copies of each of which are attached hereto:

International Search Institute—Determination of
Reducing Power and DE (Dextrose Equivalent) by Lane and
Eynon's Method;

Magers et al., *The Journal of Biological Chemistry*
(received for publication June 18, 1927).

With respect to claim 3, the Examiner states that it
is not clear where "each of 5-I- α -glucopyranosyl-L-ascorbic
acid and 6-O- α -glucopyranosyl-L-ascorbic acid [be] present in
an amount of less than 0.1% (w/w)."

This rejection is respectfully traversed. It is not
understood why the Examiner considers this language to be
unclear. The language of claim 3 has been incorporated into
claim 1. Claim 1 defines a process including allowing α -
isomaltosyl glucosaccharide-forming enzyme to act on a
solution comprising L-ascorbic acid in an amount of less than
0.1% (w/w). Claim 1 has been amended to recite that the
reaction mixture contains 5-I- α -glucopyranosyl-L-ascorbic acid
and 6-O- α -glucopyranosyl-L-ascorbic acid.

Art Rejections

Claims 1-4, 6, 7, 10-14, 16-19 and 21-23 are
rejected under 35 U.S.C. 102(b) as being anticipated by
Yamamoto et al., U.S. 5,137,723. The Examiner's position is
that the RIAGase of Yamamoto not is distinct from the α -

isomaltosyl glucosaccharide forming enzyme used in the process of claim 1.

This rejection is respectfully traversed. Claim 1 has been amended further to define the α -isomaltosyl glucosaccharide forming enzyme by reciting the origin of the enzyme. It is believed that α -isomaltosyl glucosaccharide forming enzyme is not at all the same as the RIAGase of Yamamoto. Reconsideration and withdrawal of the rejections are respectfully solicited.

It should be appreciated that one of the features of the herein claimed process is to form 2-O- α -glucopyranosyl-L-ascorbic acid while maintaining the amount of 5-O- α -glucopyranosyl-L-ascorbic acid and 6-O- α -glucopyranosyl-L-ascorbic acid at less than 0.1%. Yamamoto discloses nothing about such a process as recited in claim 1. Therefore it is believed that the present claims define allowable subject matter.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

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Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant

By: 

Anne M. Kornbau
Registration No. 25,884

AMK:srd
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
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